

REMARKS

Claims 1-9 are pending in the present application and the Examiner has rejected these claims under 35 U.S.C. 102(b) as anticipated by each of Morrison (USPN 4,494,291) and Oostwouder et al (USPN 6,266,862).

Applicant respectfully traverses these rejections for the reasons now following and reconsideration and allowance of Applicant's claims are respectfully requested.

Amendments to the Specification

The following amendments have been made:

page 4, line 11 – the words “disclosure and” have been inserted before “claims” to clarify and properly complete this sentence;

page 4, line 23 – the word “gap” has been inserted before “width” for clarification;

page 6, line 11 – a grammatical correction is made by inserting ‘at’ before the phrase “a desired elevation”;

page 6, line 14 – a comma is inserted after “tack point”;

page 6, line 23 – the words “to the” have been replaced with the more accurate words “toward a”;

page 8, line 8 – the qualification “can substantially” has been inserted before “accomplish” for accuracy;

page 9, line 7 – the qualification “a desired” has been inserted before “optimum” for accuracy;

page 10, line 22 – the qualification “substantially” has been inserted before “perpendicular” in line 23, for accuracy;

page 11, line 3 – the sentence has been corrected by removing “or”.

Amendments to the Claims

Claim 1 has been amended to delete the unnecessary “mechanical” limitation of the monitoring step. This change is supported at page 6, line 9.

Claims 2 and 4 have been amended to clarify that the fitting frame supports the outside surfaces of the tank wall and strip. This is supported by Figure 4.

Claim 4 has also been amended by adding the recitations of now-cancelled claim 5.

Claims 6-9 have been amended to remove the dependency on now-cancelled claim 5.

The Claimed Invention

Before turning to the cited prior art and the Examiner's rejections, it is useful to review some of the relevant features or elements of the invention.

The invention originated from Applicant's observation that the width of the gap between the tank wall's bottom rim and the strip's top rim, at the tack point, could be very finely adjusted by moving the lower end of the upright strip in or out radially (see page 6, lines 3 – 6 and page 7).

This discovery is reflected in Applicant's originally filed independent claims as follows:

- in method claim 1, at lines 18 – 19;
- in method claim 3, at lines 22 and 1 – 3; and
- in apparatus claim 4, at lines 12 – 13.

In a preferred feature, Applicant found it useful to provide an external arcuate fitting frame, conforming with the tank wall curvature, which functions to provide backing or bracing to the outside surfaces of the tank wall and strip, above and below the weld joint, in the vicinity of the tack point, and to combine this backing feature with means for pressing the tank wall and strip against the frame, to promote alignment and similar curvature at the tack point. This combination of features appears in Applicant's dependent claim 2 and amended independent claim 4.

In additional preferred features, Applicant recites mechanically monitoring the plumbness, elevation and levelness of the tank wall and the width of the gap in claim 3. These features also appear in Applicant's amended claim 8.

The Morrison '291 Reference

This patent describes Applicant's "old" tank construction machine. It is to be noted that the reference provides no teaching with respect to any of:

- providing means for moving the base of the strip radially in or out;
- providing an external arcuate fitting frame, coupled with inside push-out means, for externally backing the strip and tank wall at the tack point and pressing them against the fitting frame; or
- providing means for establishing, on an on-going basis, plumbness, elevation and levelness of the tank wall and width of the gap at the tack point.

As previously stated, Applicant's claims all recite the radial adjustment capability and various claims recite the external backing, internal pressing and mechanical monitoring features.

As a consequence, Applicant respectfully submits that the claims are not anticipated by Morrison '291.

The Oostwouder et al Reference

This reference discloses an assembly that involves:

- feeding a metal band 48 (i.e. strip) from a stationary coil 46 and rotating an already constructed cylindrical section 50 (i.e. tank) at identical speeds (see column 4, lines 45 – 51);
- and using a weld seam opening regulator 60 to align the metal band 48 and the cylindrical section so that the top edge 54 of the band and the lower edge 56 of the cylindrical section, so that the edges are aligned horizontally and vertically (see column 4, lines 54 – 61).

The regulator 60 comprises:

- a T-shaped frame 62 comprising an arcuate horizontal plate 64 and a vertical plate 66;
- the arcuate plate 64 carrying first and second flanged wheels 74, 76, on the plate's rear surface, which bear against the top edge 54 of the band and control its position (see column 4, lines 62 – 67 and column 5, line 1); and
- the vertical plate 66 carrying a third flanged wheel 84 on its front surface, which wheel bears against the bottom edge 56 of the cylindrical section to control its position.

In a nutshell then, the reference teaches running the tank wall and the strip through an aligning regulator 60 comprising a T-shaped plate assembly carrying flanged wheels. There is no suggestion with respect to moving the strip radially in or out at its lower end to adjust gap width.

It will be noted that the Oostwouder reference provides no teaching with respect to any of the following features which appear in applicant's claims:

- monitoring the plumbness, elevation and levelness of the tank wall;
- responsive to such monitoring, manipulating and positioning the tank wall so that it is plumb and in plane at a pre-determined elevation at the tack point;
- responsive to such gap width monitoring, radially moving the bottom of the strip to thereby adjust the plumbness of the strip and effect an adjustment of the gap width at the tack point.

As a consequence, applicant respectfully submits that the claims are not anticipated by Oostwouder et al.

Consideration and allowance of applicant's claims are therefore respectfully requested.

Respectfully submitted

MARSH FISCHMANN & BREYFOGLE LLP

By: 

David F. Dockery
Registration No. 34,323
3151 South Vaughn Way, Suite 411
Aurora, Colorado 80014
Telephone: 303-338-0997
Facsimile: 303-338-1514

Date: January 12, 2006